WSR 03-12-089

PROPOSED RULES

STATE BOARD OF HEALTH

[Filed June 4, 2003, 10:15 a.m.]

Original Notice.

Preproposal statement of inquiry was filed as WSR 03-08-028.

Title of Rule: Chapter 246-272B WAC, Large on-site sewage systems.

Purpose: Create a new chapter to address the requirements for large on-site sewage systems (LOSS), those systems with flows from 3.500 gallons per day to 14,500 gallons per day. The requirements for these systems are currently in chapter 246-272 WAC, On-site sewage systems. This proposal does not change current policy regarding LOSS. The proposal is an administrative change to create separate chapters for large on-site sewage systems and on-site sewage systems.

Statutory Authority for Adoption: RCW 43.20.050.

Statute Being Implemented: RCW 43.20.050.

Summary: These rules propose to adopt, without any material changes, all the portions of chapter 246-272 WAC that apply to LOSS.

Name of Agency Personnel Responsible for Drafting: Richard Benson, Spokane, Washington, (509) 456-6177; Implementation and Enforcement: Mark Soltman, Tumwater, Washington, (360) 236-3040.

Name of Proponent: State Board of Health, governmental.

Rule is not necessitated by federal law, federal or state court decision.

Explanation of Rule, its Purpose, and Anticipated Effects: This proposal creates a new chapter for LOSS requirements. Currently, requirements for LOSS and smaller OSS are both housed in chapter 246-272 WAC. The board anticipates that creating separate chapters for these two categories will provide clarity for regulators, developers and users.

Proposal does not change existing rules. This rule creates a new chapter for LOSS but does not change the existing rules for on-site sewage systems, chapter 246-272 WAC. It does not make any material change to the current rules for LOSS.

No small business economic impact statement has been prepared under chapter 19.85 RCW. These rules do not change any current rules or policy related to large on-site sewage systems. There are no new costs to any businesses. Therefore, no small business economic impact statement is required.

RCW 34.05.328 does not apply to this rule adoption. This rule does not meet the definition of a significant legislative rule as described in RCW 34.05.328. These rules adopt, without material change, the parts of chapter 246-272 WAC that apply to LOSS.

Hearing Location: State Board of Health Meeting, 170 South Oak, Colville City Council Chambers, Colville, WA 99114, (509) 684-5094, on July 9, 2003, at 10:15 a.m.

Assistance for Persons with Disabilities: Contact Kelly Cooper by July 2, 2003, TDD (800) 833-6388.

Submit Written Comments to: Kelly Cooper, P.O. Box 47820, Olympia, WA 98504, or online at http://www3.doh.wa.gov/policyreview/, fax (360) 236-2250, by July 2, 2003.

Date of Intended Adoption: July 9, 2003.

June 4, 2003

Don Sloma

Executive Director

OTS-6366.3

Chapter 246-272B WAC

LARGE ON-SITE SEWAGE SYSTEM REGULATIONS

NEW SECTION

WAC 246-272B-00101 Purpose, objectives, and authority. (1) The purpose of this chapter is to protect the public health by minimizing:

(a) The potential for public exposure to sewage from large on-site sewage systems (LOSS); and

(b) Adverse effects to public health that discharges from large on-site sewage systems may have on ground and surface waters.

(2) This chapter regulates the location, design, installation, operation, maintenance, and monitoring of large on-site sewage systems to:

(a) Achieve long-term sewage treatment and effluent disposal; and

(b) Limit the discharge of contaminants to waters of the state.

(3) This chapter is adopted by the state board of health in accordance with the authority granted in RCW 43.20.050 to establish minimum requirements for the department of health.

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NEW SECTION
WAC 246-272B-00501 Administration. The department shall administer this chapter under the authority and requirements of chapter 43.70 RCW. A LOSS contract jurisdiction may administer this chapter under agreement with the department.

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NEW SECTION
WAC 246-272B-01001 Definitions. **"Additive"** means a commercial product added to an on-site sewage system intended to affect performance or aesthetics of an on-site sewage system.

"Alternative system" means an on-site sewage system other than a conventional gravity system or conventional pressure distribution system. Properly operated and maintained alternative systems provide equivalent or enhanced treatment performance as compared to conventional gravity systems.

"Approved" means a written statement of acceptability, in terms of the requirements in this chapter, issued by the department.

"Approved list" means "list of approved systems and products," developed annually and maintained by the department and containing the following:

(a) List of proprietary devices approved by the department;

(b) List of specific systems meeting treatment standard 1 and treatment standard 2;

(c) List of experimental systems approved by the department;

(d) List of septic tanks, pump chambers, and holding tanks approved by the department.

"Cesspool" means a pit receiving untreated sewage and allowing the liquid to seep into the surrounding soil or rock.

"Conforming system" means any large on-site sewage system, except an experimental system, meeting any of the following criteria:

(a) Systems in full compliance with new construction requirements under this chapter; or

(b) Systems approved, installed and operating in accordance with requirements of previous editions of this chapter; or

(c) Systems or repairs permitted through departmental concurrence by the waiver process which assure public health protection by higher treatment performance or other methods.

"Conventional gravity system" means an on-site sewage system consisting of a septic tank and a subsurface soil absorption system with gravity distribution of the effluent.

"Conventional pressure distribution system" means an on-site sewage system consisting of a septic tank and a subsurface soil absorption system with pressure distribution of the effluent. Design, operation and maintenance, and performance monitoring are described by "*Guidelines for Pressure Distribution Systems*" by the Washington state department of health.

"Covenant" means a recorded agreement stating certain activities and/or practices are required or prohibited.

"Cuts and/or banks" means any naturally occurring or artificially formed slope greater than one hundred percent (forty-five degrees) and extending vertically at least five feet from the toe of the slope to the top of the slope as follows:

Place illustration here.

"Designer" means a person who matches site and soil characteristics with appropriate on-site sewage technology.

"Development" means the creation of a residence, structure, facility, mobile home park, subdivision, planned unit development, site, area, or any activity resulting in the production of sewage.

"Department" means the Washington state department of health.

"Disposal component" means a subsurface absorption system (SSAS) or other soil absorption system receiving septic tank or other pretreatment device effluent and transmitting it into original, undisturbed soil.

"Effluent" means liquid discharged from a septic tank or other large on-site sewage system component.

"Engineer" means a person who is licensed and in good standing under chapter 18.43 RCW.

"Expansion" means a change in a residence, facility, site, or use that:

(a) Causes an on-site sewage system to exceed its existing treatment or disposal capability, for example, when a residence is increased from two to three bedrooms or a change in use from an office to a restaurant; or

(b) Reduces the treatment or disposal capability of the existing on-site sewage system or the reserve area, for example, when a building is placed over a reserve area.

"Experimental system" means any alternative system:

(a) Without design guidelines developed by the department; or

(b) A proprietary device or method which has not yet been evaluated and approved by the department.

"Failure" means a condition of a large on-site sewage system that threatens the public health by inadequately treating sewage or by creating a potential for direct or indirect contact between sewage and the public.

Examples of failure include:

(a) Sewage on the surface of the ground;

(b) Sewage backing up into a structure caused by slow soil absorption of septic tank effluent;

(c) Sewage leaking from a septic tank, pump chamber, holding tank, or collection system;

(d) Cesspools or seepage pits where evidence of ground water or surface water quality degradation exists;

(e) Inadequately treated effluent contaminating ground water or surface water; or

(f) Noncompliance with standards stipulated on the permit.

"Ground water" means a subsurface water occupying the zone of saturated soil, permanently, seasonally, or as the result of the tides. Indications of ground water may include:

(a) Water seeping into or standing in an open excavation from the soil surrounding the excavation.

(b) Spots or blotches of different color or shades of color interspersed with a dominant color in soil, commonly referred to as mottling. Mottling is a historic indication for the presence of ground water caused by intermittent periods of saturation and drying, and may be indicative of poor aeration and impeded drainage. Also see "water table."

"Holding tank sewage system" means a large on-site sewage system which incorporates a holding tank, the services of a sewage pumper/hauler, and the off-site treatment and disposal for the sewage generated.

"Industrial wastewater" means the water or liquid-carried waste from an industrial process. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feedlots, poultry houses, or dairies. The term includes contaminated storm water and leachate from solid waste facilities.

"Installer" means a qualified person approved by a local health officer to install or repair on-site sewage systems or components.

"Large on-site sewage system (LOSS)" means an integrated arrangement of components for a residence, building, industrial establishment or other places not connected to a public sewer system which:

(a) Conveys, stores, treats, and/or provides subsurface soil treatment and disposal on the property where it originates, or on adjacent or nearby property; and

(b) Includes piping, treatment devices, other accessories, and soil underlying the disposal component of the initial and reserve areas; and

(c) Has design flows, at any common point, greater than three thousand five hundred gallons per day.

"LOSS contract jurisdiction" means a local health jurisdiction that by contract with the department has delineated responsibilities and authority for LOSS within their jurisdiction. For these jurisdictions the term "department" shall be applied to them throughout this chapter, except as otherwise noted.

"Local health officer" means the health officer of the city, county, or city-county health department or district within the state of Washington, or a representative authorized by and under the direct supervision of the local health officer, as defined in chapter 70.05 RCW.

"May" means discretionary, permissive, or allowed.

"Ordinary high-water mark" means the mark on lakes, streams, and tidal waters, found by examining the beds and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland with respect to vegetation, as that condition exists on the effective date of this chapter, or as it may naturally change thereafter. The following definitions apply where the ordinary high-water mark cannot be found:

(a) The ordinary high-water mark adjoining marine water is the elevation at mean higher high tide; and

(b) The ordinary high-water mark adjoining freshwater is the line of mean high water.

"Person" means any individual, corporation, company, association, society, firm, partnership, joint stock company, or any governmental agency, or the authorized agents of any such entities.

"Planned unit development" means a development characterized by a unified site design, clustered residential units and/or commercial units, and areas of common open space.

"Pressure distribution" means a system of small diameter pipes equally distributing effluent throughout a trench or bed, as described in the "*Guidelines for Pressure Distribution Systems*" by the department. Also see "conventional pressure distribution."

"Proprietary device or method" means a device or method classified as an alternative system, or a component thereof, held under a patent, trademark or copyright.

"Public sewer system" means a sewerage system:

(a) Owned or operated by a city, town, municipal corporation, county, or other approved ownership consisting of a collection system and necessary trunks, pumping facilities and a means of final treatment and disposal; and

(b) Approved by or under permit from the department of ecology, the department of health and/or a local health officer.

"Pumper" means a person approved by the local health officer to remove and transport wastewater or septage from large on-site sewage systems.

"Repair" means restoration, by reconstruction or relocation, or replacement of a failed large on-site sewage system.

"Reserve area" means an area of land approved for the installation of a conforming system and dedicated for replacement of the LOSS upon its failure.

"Restrictive layer" means a stratum impeding the vertical movement of water, air, and growth of plant roots, such as hardpan, claypan, fragipan, caliche, some compacted soils, bedrock and unstructured clay soils.

"Seepage pit" means an excavation more than three feet deep where the sidewall of the excavation is designed to dispose of septic tank effluent. Seepage pits may also be called "dry wells."

"Septage" means the mixture of solid wastes, scum, sludge, and liquids pumped from within septic tanks, pump chambers, holding tanks, and other LOSS components.

"Septic tank" means a watertight pretreatment receptacle receiving the discharge of sewage from a building sewer or sewers, designed and constructed to permit separation of settleable and floating solids from the liquid, detention and anaerobic digestion of the organic matter, prior to discharge of the liquid.

"Sewage" means any urine, feces, and the water carrying human wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments or other places. For the purposes of these regulations, "sewage" is generally synonymous with domestic wastewater. Also see "residential sewage."

"Shall" means mandatory.

"Soil log" means a detailed description of soil characteristics providing information on the soil's capacity to act as an acceptable treatment and disposal medium for sewage.

"Soil type" means a numerical classification of fine earth particles and coarse fragments as described in WAC 246-272B-11001 (2)(e).

"Subdivision" means a division of land or creation of lots or parcels, described under chapter 58.17 RCW, now or as hereafter amended, including both long and short subdivisions, planned unit developments, and mobile home parks.

"SSAS" or **"subsurface soil absorption system"** means a system of trenches three feet or less in width, or beds between three and ten feet in width, containing distribution pipe within a layer of clean gravel designed and installed in original, undisturbed soil for the purpose of receiving effluent and transmitting it into the soil.

"Surface water" means any body of water, whether fresh or marine, flowing or contained in natural or artificial unlined depressions for significant periods of the year, including natural and artificial lakes, ponds, springs, rivers, streams, swamps, marshes, and tidal waters.

"Treatment standard 1" means a thirty-day average of less than 10 milligrams per liter of biochemical oxygen demand (five-day BOD_5), 10 milligrams per liter of total suspended solids (TSS), and a thirty-day geometric mean of less than 200 fecal coliform per 100 milliliters.

"Treatment standard 2" means a thirty-day average of less than 10 milligrams per liter of biochemical oxygen demand (five-day BOD_5), 10 milligrams per liter of total suspended solids (TSS), and a thirty-day geometric mean of less than 800 fecal coliform per 100 milliliters.

"Unit volume of sewage" means:

(a) A single family residence;

(b) A mobile home site in a mobile home park; or

(c) Four hundred fifty gallons of sewage per day where the proposed development is not single family residences or a mobile home park.

"Vertical separation" means the depth of unsaturated, original, undisturbed soil of soil types 1B-6 between the bottom of a disposal component and the highest seasonal water table, a restrictive layer, or soil type 1A, as illustrated below by the profile drawing of a subsurface soil absorption system:

Place illustration here.

"Water table" means the upper surface of the ground water, whether permanent or seasonal. Also see "ground water."

"Wave barrier" means a bulkhead of adequate height and construction protecting the immediate area of on-site sewage system components from wave action.

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NEW SECTION

WAC 246-272B-03001 Applicability. (1) The department:

(a) Shall apply this chapter to LOSS treating wastewater and disposing of effluent from residential sewage sources;

(b) May apply this chapter to LOSS for sources other than residential sewage, excluding industrial wastewater, if pretreatment, siting, design, installation, and operation and maintenance measures provide treatment and effluent disposal equal to that required of residential sewage.

(2) Preliminary plats specifying general methods of sewage treatment, disposal, system designs and locations approved prior to the effective date of these regulations shall be acted upon in accordance with regulations in force at the time of preliminary plat approval for a maximum period of five years from the date of approval or for an additional year beyond the effective date of these regulations, whichever assures the most lenient expiration date.

(3) A valid sewage system design approval, or installation permit issued prior to January 15, 1995:

(a) Shall be acted upon in accordance with regulations in force at the time of issuance;

(b) Shall have a maximum validity period of two years from the date of issuance or remain valid for an additional year beyond January 15, 1995, whichever assures the most lenient expiration date; and

(c) May be modified to include additional requirements if the health officer determines that a serious threat to public health exists.

(4) The Washington state department of ecology has authority and approval over:

(a) Domestic or industrial wastewater under chapter 173-240 WAC; and

(b) Sewage systems using mechanical treatment, or lagoons, with ultimate design flows above three thousand five hundred gallons per day.

(5) The Washington state department of health has authority and approval over:

(a) Systems with design flows through any common point between three thousand five hundred to fourteen thousand five hundred gallons per day; and

(b) Any large on-site sewage system "LOSS" for which jurisdiction has been transferred to the department of health under conditions of memorandum of agreement with the department of ecology.

(6) The local health officer has authority and approval over:

(a) Systems with design flows through any common point up to three thousand five hundred gallons per day;

(b) Any large on-site sewage system "LOSS" for which jurisdiction has been transferred to a local health jurisdiction from the department by contract.

(7) Where this chapter conflicts with chapter 90.48 RCW, Water pollution control, the requirements under those statutes apply.

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NEW SECTION

WAC 246-272B-08001 Application and approval process. (1) Persons proposing a new LOSS for which the department has jurisdiction by WAC or memorandum of agreement with the department of ecology shall meet the requirements specified in "*Design Standards for Large On-site Sewage Systems*," 1993, Washington state department of health (available upon written request to the department).

(2) Persons shall submit the documents and fees specified under (a) through (f) of this subsection and obtain approval from the department before installing a LOSS to serve any facility:

(a) A preliminary report, stamped and signed by an engineer, including:

(i) A discussion of the proposed project, including the schedule of construction;

(ii) A discussion of compliance with other state and local zoning, platting, health, and building regulations as they relate to sewage treatment and disposal;

(iii) An analysis of the site's capacity to treat and dispose of the proposed quantity and quality of sewage;

(iv) An analysis of the factors identified in WAC 246-272B-20501 (2)(d)(ii)(A); and

(v) A soil and site evaluation as specified in WAC 246-272B-11001 signed by the evaluator;

(vi) A management plan describing the:

(A) Management entity consisting of one of the following:

(I) For residential subdivisions where the lots are individually owned, a public entity serves as the primary management entity, or as the third party trust for a private management entity; or

(II) For other uses, including single ownership, a public entity or a private entity via an appropriate contract or agreement provides management;

(B) Duties of the management entity, including specific tasks and frequency of operation and maintenance;

(C) Controls to ensure the continuity and permanency of proper operation and maintenance;

(D) Methods and frequency of monitoring, recordkeeping, and reporting to the department;

(E) Rights and responsibilities of management; and

(F) Rights and responsibilities of persons purchasing connections to the LOSS.

(b) Complete plans and specifications of the LOSS:

(i) Showing a conventional pressure distribution system with three feet of vertical separation;

(ii) Meeting all other design criteria within "*Design Standards for Large On-site Sewage Systems*," 1993, Washington state department of health (available upon written request to the department); and

(iii) Stamped and signed by an engineer;

(c) A schedule of inspections to confirm the installation conforms to the plans and specifications;

(d) A draft operation and maintenance manual, describing the LOSS and outlining routine maintenance procedures for proper operation of the system;

(e) Required fees; and

(f) Other information as required by the department.

(3) Persons desiring to repair, modify or expand a facility served, or to be served by a LOSS shall submit all documents and fees specified under

subsection (2)(a) through (f) of this section, unless the department waives submission of some elements as unnecessary, and obtain approval from the department.

(4) The department:

(a) Shall not change the terms of a project's construction approval during a two-year validity period. However, additional terms to protect public health may be included before granting one-year approval permit extensions;

(b) Shall not permit an experimental LOSS;

(c) Shall only permit installation of alternative systems for which there are alternative system guidelines;

(d) Shall conduct a presite inspection; and

(e) May allow the applicant to renew approval under the initial terms for successive one-year periods if:

(i) The LOSS is incomplete two years after the department's approval;

(ii) The applicant requests renewal in writing; and

(iii) The applicant submits required fees.

(5) A qualified installer shall install the LOSS.

(6) The applicant or applicant's agent:

(a) Shall comply with all conditions set forth in the department's construction approval;

(b) May request extensions to the construction approval permit; and

(c) Shall comply with any additional conditions upon construction approval extensions set forth by the department, and pay required fees for renewing the approval.

(7) Before a new LOSS is used:

(a) An engineer shall stamp, sign, and submit a LOSS construction report to the department within sixty days following the completion of construction of the LOSS including:

(i) A completed form stating the LOSS was constructed in accordance with the department's approved plans and specifications; and

(ii) An "as built" or "record" drawing;

(b) The department shall conduct a final inspection; and

(c) The owner shall:

(i) Submit an operation and maintenance manual developed by an engineer for the installed LOSS to the department for review and approval; and

(ii) Obtain a LOSS operating permit from the department by:

(A) Completing and submitting forms to the department; and

(B) Paying required fees.

(8) The owner of a LOSS that has been approved by the department or local health officer or constructed after July 1, 1984, shall:

(a) Obtain a LOSS operating permit from the department; and

(b) Annually renew it.

(9) The owner shall annually renew the LOSS operating permit by:

(a) Continued retention of an approved management entity to operate and maintain the LOSS;

(b) Submitting a report to the department demonstrating the LOSS is operated, maintained, and monitored in accordance with this chapter and the approved operation and maintenance manual; and

(c) Submitting required fees.

(10) The department:

(a) Shall issue a LOSS operating permit to owners of LOSS meeting the requirements of subsections (1) through (7) of this section;

(b) Shall annually renew the LOSS operating permit when the owner has complied with the requirements under subsection (9) of this section;

(c) May revoke the LOSS operating permit when the:

(i) Approved management entity ceases to operate and maintain the LOSS;

(ii) Owner does not meet other conditions of the LOSS operating permit; or

(iii) LOSS fails;

(d) Shall monitor the performance of LOSS; and

(e) Shall apply the requirements under WAC 246-272B-16501 to failing LOSS.

(11) A local health officer and the department may enter into a contract under which:

(a) The local health officer will assume the department's responsibilities in subsections (2), (4), (6), (7)(a), (b) and (c)(i) of this section to regulate LOSS; and

(b) The local health officer may charge fees to a LOSS applicant or owner for services provided if the authorization for such fees is set forth in local regulations adopted under this chapter.

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NEW SECTION

WAC 246-272B-09501 Location. (1) Persons shall design and install LOSS to meet the minimum horizontal separations shown in Table I, Minimum Horizontal Separations:

Table I

Minimum Horizontal Separations

Items Requiring Setback	From edge of disposal component and reserve area	From septic tank, holding tank, containment vessel, pump chamber, and distribution box	From building sewer, collection, and nonperforated distribution line[1]
Nonpublic well or suction line	100 ft.	50 ft.	50 ft.
Public drinking water well	100 ft.	100 ft.	100 ft.
Public drinking water spring[3]	200 ft.	200 ft.	100 ft.
Spring or surface water used as drinking water source[2,3]	100 ft.	50 ft.	50 ft.
Pressurized water supply line[4]	10 ft.	10 ft.	10 ft.
Properly decommissioned well[5]	10 ft.	N/A	N/A
Surface water[3]:			
Marine water	100 ft.	50 ft.	10 ft.
Freshwater	100 ft.	50 ft.	10 ft.
Building foundation	10 ft.[6]	5 ft.[6]	2 ft.
Property or easement line[6]	5 ft.	5 ft.	N/A
Interceptor/curtain drains/drainage ditches:			
Down-gradient[7]	30 ft.	5 ft.	N/A
Up-gradient[7]	10 ft.	N/A	N/A

Down-gradient cuts or banks with at least 5 ft. of original, undisturbed soil above a restrictive layer due to a structural or textural change	25 ft.	N/A	N/A
Down-gradient cuts or banks with less than 5 ft. of original, undisturbed soil above a restrictive layer due to a structural or textural change	50 ft.	N/A	N/A

[1]"Building sewer" as defined by the most current edition of the Uniform Plumbing Code. "Nonperforated distribution" includes pressure sewer transport lines.

[2]If surface water is used as a public drinking water supply, the designer shall locate the LOSS outside of the required sanitary control area.

[3]Measured from the ordinary high-water mark.

[4]The local health officer may approve a sewer transport line within ten feet of a water supply line if the sewer line is constructed in accordance with section 2.4 of the department of ecology's "*Criteria For Sewage Works Design*," revised October 1985, or equivalent.

[5]Before any component can be placed within 100 feet of a well, the designer shall submit a "decommissioned water well report" provided by a licensed well driller, which verifies that appropriate decommissioning procedures noted in chapter 173-160 WAC were followed. Once the well is properly decommissioned, it no longer provides a potential conduit to ground water, but septic tanks, pump chambers, containment vessels or distribution boxes should not be placed directly over the site.

[6]The local health officer may allow a reduced horizontal separation to not less than two feet where the property line, easement line, or building foundation is up-gradient.

[7]The item is down-gradient when liquid will flow toward it upon encountering a water table or a restrictive layer. The item is up-gradient when liquid will flow away from it upon encountering a water table or restrictive layer.

(2) Where any condition indicates a greater potential for contamination or pollution, the department may increase the minimum horizontal separations. Examples of such conditions include excessively permeable soils, unconfined aquifers, shallow or saturated soils, dug wells, and improperly abandoned wells.

(3) Persons shall design and/or install disposal components only where:

(a) The slope is less than forty-five percent (twenty-four degrees);

(b) The area is not subject to:

(i) Encroachment by buildings or construction such as placement of swimming pools, power poles and underground utilities;

(ii) Cover by impervious material;

(iii) Vehicular traffic; or

(iv) Other activities adversely affecting the soil or the performance of the LOSS;

(c) Sufficient reserve area for replacement exists to treat and dispose one hundred percent of the design flow;

(d) The land is stable; and

(e) Surface drainage is directed away from the site.

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NEW SECTION
WAC 246-272B-11001 Soil and site evaluation. (1) The department shall permit only engineers, qualified designers and soil scientists to perform soil and site evaluations.

(2) The person evaluating the soil and site shall:

(a) Record:

(i) A sufficient number of soil logs to evaluate conditions within:

(A) The initial disposal component; and

(B) The reserve area.

(ii) The ground water conditions, the date of the observation, and the probable maximum height;

(iii) The topography of the site;

(iv) The drainage characteristics of the site;

(v) The existence of structurally deficient soils subject to major wind or water erosion events such as slide zones and dunes;

(vi) The existence of designated flood plains; and

(vii) The location of existing encumbrances affecting system placement, such as:

(A) Wells and suction lines;

(B) Water sources and supply lines;

(C) Surface water;

(D) Abandoned wells;

(E) Outcrops of bedrock and restrictive layers;

(F) Buildings;

(G) Property lines and lines of easement;

(H) Interceptors such as footing drains, curtain drains and drainage ditches;

(I) Cuts, banks, and fills;

(J) Driveways and parking areas;

(K) Existing OSS; and

(L) Underground utilities.

(b) Use the soil and site evaluation procedures and terminology in accordance with chapter 3 and Appendix A of the "*Design Manual: On-site Wastewater Treatment and Disposal Systems*," United States Environmental Protection

Agency, EPA-625/1-80-012, October, 1980, except where modified by, or in conflict with, this chapter (available upon written request to the department);

(c) Use the soil names and particle size limits of the United States Department of Agriculture Soil Conservation Service classification system;

(d) Determine texture, structure, compaction and other soil characteristics that affect the treatment and water movement potential of the soil by using normal field and/or laboratory procedures such as particle size analysis; and

(e) Classify the soil as in Table II, Soil Textural Classification:

Table II

Soil Textural Classification

Soil Type	Soil Textural Classifications
1A	Very gravelly[1] coarse sands or coarser.
	All extremely gravelly[2] soils.
1B	Very gravelly medium sand, very gravelly fine sand.
	Very gravelly very fine sand, very gravelly loamy sands.
2A	Coarse sands (also includes ASTM C-33 sand).
2B	Medium sands.
3	Fine sands, loamy coarse sands, loamy medium sands.
4	Very fine sands, loamy fine sands, loamy very fine sands, sandy loams, loams.
5	Silt loams, that are porous and have well-developed structure.
6	Other silt loams, sandy clay loams, clay loams.
	Silty clay loams.
Unsuitable for treatment or disposal	Sandy clay, clay, silty clay, and strongly cemented or firm soils.

[1]Very gravelly = >35% and <60% gravel and coarse fragments, by volume.

[2]Extremely gravelly = >60% gravel and coarse fragments, by volume.

(3) The owner of the property or his agent shall:

(a) Prepare the soil log excavation to:

(i) Allow examination of the soil profile in its original position by:

(A) Excavating pits of sufficient dimensions to enable observation of soil characteristics by visual and tactile means to a depth three feet deeper than the anticipated bottom of the disposal component; or

(B) Stopping at a shallower depth if a water table or restrictive layer is encountered; and

(ii) Allow determination of the soil's texture, structure, color, bulk density or compaction, water absorption capabilities or permeability, and elevation of the highest seasonal water table; and

(b) Assume responsibility for constructing and maintaining the soil log excavation in a manner to reduce potential for physical injury by:

(i) Placing excavated soil no closer than two feet of the excavation;

(ii) Providing a ladder, earth ramp or steps for safe egress to a depth of four feet, then scoop out a portion from the floor to gain the additional two-foot depth necessary to observe the six feet of soil face; however, the scooped portion is not to be entered;

(iii) Provide a physical warning barrier around the excavation's perimeter; and

(iv) Fill the excavation upon completion of the soil log.

(4) The department:

(a) Shall render a decision on the height of the water table within twelve months of receiving the application under precipitation conditions typical for the region;

(b) May require water table measurements to be recorded during months of probable high-water table conditions, if insufficient information is available to determine the highest seasonal water table;

(c) May require any other soil and site information affecting location, design, or installation; and

(d) May reduce the required number of soil logs for LOSS if adequate soils information has previously been developed.

[]

NEW SECTION

WAC 246-272B-11501 Design. (1) The department shall require that large on-site sewage systems be designed only by engineers.

(2) The department shall require the following design criteria:

(a) All the sewage from the building served is directed to the LOSS;

(b) Drainage from the surface, footing drains, roof drains, and other nonsewage drains is prevented from entering the LOSS and the area where the LOSS is located;

(c) The LOSS is designed to treat and dispose of the following flows:

(i) For single family residences, one hundred twenty gallons per bedroom per day, with a minimum of two hundred forty gallons per day, unless technical justification is provided to support calculations using a lower design flow;

(A) For other facilities, the design flows noted in "*Design Manual: On-site Wastewater Treatment and Disposal Systems*," United States Environmental Protection Agency, EPA-625/1-80-012, October, 1980 (available upon written request to the department). If the type of facility is not listed in the EPA design manual, design flows from one of the following documents are used: "*Design Standards for Large On-site Sewage Systems*," 1993, Washington state department of health (available upon request to the department); or

(B) "*Criteria for Sewage Works Design*," revised October 1985, Washington state department of ecology (available upon written request to the department of ecology).

(d) Septic tanks:

(i) Have the following minimum liquid capacities:

(A) For a single family residence use Table III, Required Minimum Liquid Volumes of Septic Tanks:

Table III

Required Minimum Liquid Volumes of Septic Tanks

Number of Bedrooms	Required minimum liquid tank volume in gallons
≤3	900
4	1000
Each additional bedroom	250

(B) For facilities handling residential sewage, other than one single family residence, 1.5 times the daily design flow with a minimum of 1000 gallons;

(ii) Have clean-out and inspection accesses within twelve inches of finished grade; and

(iii) Are designed with protection against floatation and ground water intrusion in high ground water areas;

(e) Pump chambers:

(i) Have clean-out and inspection accesses at or above finished grade; and

(ii) Are designed with protection against floatation, ground water intrusion, and surface water inflow in high ground water areas;

(f) SSAS beds are only designed in soil types 2A, 2B, with a width not exceeding ten feet;

(g) Conventional pressure distribution systems have:

(i) The calculation of absorption area based upon the design flows in subsection (2)(c) of this section and loading rates equal to or less than those in Table V, Maximum Hydraulic Loading Rate for Residential Sewage, and applied only to the bottom of the trench of the excavation.

Table V

Maximum Hydraulic Loading Rate For Residential Sewage[1]

Soil Type	Soil Textural Classification Description	Loading Rate gal./sq. ft./day
1A	Very gravelly[2] coarse sands or coarser, extremely gravelly[3] soils.	Varies according to system selected to meet treatment standard 2[4].
1B	Very gravelly medium sands, very gravelly fine sands, very gravelly very fine sands, very gravelly loamy sands.	Varies according to soil type of the nongravel portion[5].

2A	Coarse sands (includes the ASTM C-33 sand).	1.2
2B	Medium sands.	1.0
3	Fine sands, loamy coarse sands, loamy medium sands.	0.8
4	Very fine sands, loamy fine sands, loamy very fine sands, sandy loams, loams.	0.6
5	Silt loams that are porous and have well-developed structure.	0.45

[1]Compacted soils, cemented soils, and/or poor soil structure may require a reduction of the loading rate or make the soil unsuitable for conventional OSS systems.

[2]Very gravelly = >35% and <60% gravel and coarse fragments, by volume.

[3]Extremely gravelly = >60% gravel and coarse fragments, by volume.

[4]Due to the highly permeable nature of type 1A soil, only alternative systems which meet or exceed treatment standard 2 can be installed. However, a conventional gravity system may be used if it meets all criteria listed under (h) of this subsection (WAC 246-272-11501 (2)(h)). The loading rate for these systems is provided in the appropriate guideline.

[5]The maximum loading rate listed for the soil described as the nongravel portion is to be used for calculating the absorption surface area required. The value is to be determined from this table.

(ii) The bottom of a SSAS shall not be deeper than three feet below the finished grade, except under special conditions approved by the local health officer. The depth of such system shall not exceed ten feet from the finished grade;

(iii) The sidewall below the invert of the distribution pipe is located in original, undisturbed soil;

(iv) Clean gravel, covered with a geotextile; and

(v) A cover of between six and twenty-four inches of mineral soil containing no greater than ten percent organic content over the gravel to preclude accumulation of water over the drainfield;

(h) For other features, conventional gravity systems shall conform with the "*Design Manual: On-site Wastewater Treatment and Disposal Systems*," United

States Environmental Protection Agency, EPA-625/1-80-012, October, 1980 (available upon written request to the department) except where modified by, or in conflict with, this section or local regulations.

(3) The department:

(a) Shall approve only LOSS designs meeting the requirements of this chapter;

(b) Shall not approve designs for:

(i) Cesspools;

(ii) Seepage pits, except as allowed for repairs under WAC 246-272B-16501;

(c) May approve a design for the reserve area different than the design approved for the initial LOSS, if both designs meet the requirements of this chapter for new construction; and

(d) May allow the hydraulic loading rate calculated for the infiltration surface area in a disposal component to include six inches of the SSAS sidewall height for determining design flow where total recharge by annual precipitation and irrigation is less than twelve inches per year.

[]

NEW SECTION

WAC 246-272B-12501 Holding tank sewage systems. (1) Persons shall not install or use holding tank sewage systems for residential development or expansion of residences, whether seasonal or year-round, except:

(a) For permanent uses limited to controlled, part-time, commercial usage situations, such as, recreational vehicle parks and trailer dump stations.

(b) For interim uses limited to handling of emergency situations.

(c) For repairs as permitted under WAC 246-272B-16501 (1)(c)(i).

(2) A person proposing to use a holding tank sewage system shall:

(a) Follow established design criteria established by the department;

(b) Submit a management program to the department assuring ongoing operation and maintenance before the department grants project approval; and

(c) Use a holding tank on the current approved list.

[]

NEW SECTION
WAC 246-272B-13501 Installation. (1) The department shall require approved installers to construct LOSS.

(2) The installer shall:

(a) Follow the approved design;

(b) Have the approved design in possession during installation;

(c) Only install septic tanks, pump chambers, and holding tanks approved by the department;

(d) Be on the site at all times during the excavation and construction of the LOSS;

(e) Install the LOSS to be watertight, except for the disposal component;

(f) Cover the installation only after the department has given approval to cover; and

(g) Back fill and grade the site to prevent surface water from accumulating over any component of the LOSS.

[]

NEW SECTION
WAC 246-272B-15501 Operation and maintenance. (1) The LOSS owner is responsible for properly operating and maintaining the LOSS, and shall:

(a) Determine the level of solids and scum in the septic tank once every three years;

(b) Employ an approved pumper to remove the septage from the tank when the level of solids and scum indicates that removal is necessary;

(c) Protect the LOSS area and the reserve area from:

(i) Cover by structures or impervious material;

(ii) Surface drainage;

(iii) Soil compaction, for example by vehicular traffic or livestock; and

(iv) Damage by soil removal and grade alteration;

(d) Keep the flow of sewage to the LOSS at or below the approved design both in quantity and waste strength;

(e) Operate and maintain the LOSS as directed by the department; and

(f) Direct drains, such as footing or roof drains, away from the area where the LOSS is located.

(2) Persons shall not:

(a) Use or introduce strong bases, acids or chlorinated organic solvents into a LOSS for the purpose of system cleaning;

(b) Use a sewage system additive unless it is specifically approved by the department; or

(c) Use a LOSS to dispose of waste components atypical of residential wastewater.

[]

NEW SECTION
WAC 246-272B-16501 Repair of failures. (1) When a LOSS failure occurs, the LOSS owner shall:

(a) Repair or replace the LOSS with a conforming system on the:

(i) Property served; or

(ii) Nearby or adjacent property if easements are obtained; or

(b) Connect the residence or facility to a:

(i) Publicly owned LOSS; or

(ii) Privately owned LOSS where it is deemed economically feasible; or

(iii) Public sewer; or

(c) Perform one of the following when requirements in (a) or (b) of this subsection are not feasible:

(i) Use a holding tank; or

(ii) Obtain a National Pollution Discharge Elimination System or state discharge permit from the Washington state department of ecology issued to a public entity or jointly to a public entity and the system owner only when the local health officer determines:

(A) A LOSS is not feasible; and

(B) The only realistic method of final disposal of treated effluent is discharge to the surface of the land or into surface water; or

(iii) Abandon the property.

(2) Prior to replacing or repairing the effluent disposal component, the LOSS owner shall develop and submit information required under WAC 246-272B-08001.

(3) The person responsible for the design shall locate and design repairs to:

(a) Protect drinking water sources;

(b) Prevent the direct discharge of sewage to ground water, surface water, or upon the surface of the ground;

(c) Meet the horizontal separations under WAC 246-272B-09501(1) to public drinking water sources;

(d) Meet other requirements of this chapter to the maximum extent permitted by the site; and

(e) Maximize the:

(i) Vertical separation;

(ii) Distance from a well, spring, or suction line; and

(iii) Distance to surface water.

[]

NEW SECTION

WAC 246-272B-17501 Expansions. The department shall require an on-site sewage system

and a reserve area in full compliance with the new system construction standards specified in this chapter for an expansion of a residence or other facility.

[]

NEW SECTION
WAC 246-272B-18501 Abandonment. Persons permanently removing a septic tank, seepage pit, cesspool, or other sewage container from service shall:

(1) Have the septage removed by an approved pumper;

(2) Remove or destroy the lid; and

(3) Fill the void with soil.

[]

NEW SECTION
WAC 246-272B-19501 Septage management. (1) An individual shall be approved by the local health officer as a qualified pumper before removing septage from a LOSS.

(2) Persons removing septage from a LOSS shall:

(a) Transport septage or sewage only in vehicles clearly identified with the name of the business and approved by the local health officer;

(b) Record and report septage removal to the local health officer;

(c) Dispose of septage, or apply septage biosolids to land only in a manner consistent with applicable laws.

[]

NEW SECTION
WAC 246-272B-20501 Developments, subdivisions, and minimum land area requirements. (1) A person proposing the development shall obtain approval from the local health officer prior to any development where the use of LOSS is proposed.

(2) The local health officer shall require the following prior to approving any development:

(a) Site evaluations as required under WAC 246-272B-11001, excluding subsections (3)(a)(i) and (4)(d);

(b) Where a subdivision with individual wells is proposed:

(i) Configuration of each lot to allow a one hundred-foot radius water supply protection zone to fit within the lot lines; or

(ii) Establishment of a one hundred-foot protection zone around each existing and proposed well site;

(c) Where preliminary approval of a subdivision is requested, provision of at least one soil log per proposed lot, unless the local health officer determines existing soils information allows fewer soil logs;

(d) Determination of the minimum lot size or minimum land area required for the development using method I and/or method II:

(i) **METHOD I.** Table VII, Single Family Residence Minimum Lot Size or Minimum Land Area Required Per Unit Volume of Sewage, shows the minimum lot size required per single family residence. For developments other than single family residences, the minimum land areas shown are required for each unit volume of sewage.

Table VII

Minimum Land Area Requirement

Single Family Residence or Unit Volume of Sewage

Type of water supply	Soil Type (defined by section 11001 of this chapter)

	1A, 1B	2A, 2B	3	4	5	6
Public	0.5 acre[1] 2.5 acre[2]	12,500 sq. ft.	15,000 sq. ft.	18,000 sq. ft.	20,000 sq. ft.	22,000 sq. ft.
Individual on each lot	1.0 acre[1] 2.5 acres[2]	1 acre	1 acre	1 acre	2 acres	2 acres

[1]Due to the highly permeable nature of soil type 1A, only alternative systems which meet or exceed treatment standard 2 can be installed.

[2]A conventional gravity system in type 1 soil is only allowed if it is in compliance with all conditions listed under WAC 246-272-11501 (2)(h). One of these limiting conditions is a 2.5 acre minimum lot size.

(ii) **METHOD II.** A minimum land area proposal using method II is acceptable only when the applicant:

(A) Justifies the proposal through a written analysis of the:

(I) Soil type and depth;

(II) Area drainage, and/or lot drainage;

(III) Public health impact on ground and surface water quality;

(IV) Setbacks from property lines, water supplies, etc.;

(V) Source of domestic water;

(VI) Topography, geology, and ground cover;

(VII) Climatic conditions;

(VIII) Availability of public sewers;

(IX) Activity or land use, present, and anticipated;

(X) Growth patterns;

(XI) Reserve areas for additional subsurface treatment and disposal;

(XII) Anticipated sewage volume;

(XIII) Compliance with current planning and zoning requirements;

(XIV) Possible use of alternative systems or designs;

(XV) Existing encumbrances, such as listed in WAC 246-272B-09001 (1)(c)(v) and 246-272B-11001 (2)(a)(vii); and

(XVI) Any other information required by the local health officer.

(B) Shows development with public water supplies having:

(I) At least twelve thousand five hundred square feet lot sizes per single family residence;

(II) No more than 3.5 unit volumes of sewage per day per acre for developments other than single family residences; and

(C) Shows development with individual water supplies having at least one acre per unit volume of sewage; and

(D) Shows land area under surface water is not included in the minimum land area calculation; and

(e) Regardless of which method is used for determining required minimum lot sizes or minimum land area, submittal to the health officer of information consisting of field data, plans, and reports supporting a conclusion the land area provided is sufficient to:

(i) Install conforming LOSS;

(ii) Assure preservation of reserve areas for proposed and existing LOSS;

(iii) Properly treat and dispose of the sewage; and

(iv) Minimize public health effects from the accumulation of contaminants in surface and ground water.

(3) The local health officer or department shall require lot areas of twelve thousand five hundred square feet or larger except when a person proposes:

(a) LOSS within the boundaries of a recognized sewer utility having a finalized assessment roll; or

(b) A planned unit development with:

(i) A signed, notarized, and recorded deed covenant restricting any development of lots or parcels above the approved density with the density meeting the minimum land area requirements of subsection (2)(d) of this section;

(ii) A public entity responsible for operation and maintenance of the LOSS, or a single individual owning the LOSS;

(iii) Management requirements under WAC 246-272B-08001 when installing a LOSS; and

(iv) Extinguishment of the deed covenant and higher density development allowed only when the development connects to public sewers.

(4) The local health officer or department may:

(a) Allow inclusion of the area to the centerline of a road or street right of way in a method II determination under subsection WAC 246-272B-20501 (2)(d)(ii) to be included in the minimum land area calculation if:

(i) The dedicated road or street right of ways are along the perimeter of the development;

(ii) The road or street right of ways are dedicated as part of the proposed development; and

(iii) Lots are at least twelve thousand five hundred square feet in size.

(b) Require detailed plot plans and LOSS designs prior to final approval of subdivision proposals;

(c) Require larger land areas or lot sizes to achieve public health protection; or

(d) Prohibit development on individual lots within the boundaries of an approved subdivision if the proposed LOSS design does not protect public health by meeting requirements of these regulations.

[]

NEW SECTION
WAC 246-272B-25001 Waiver of state regulations. (1) The department may grant a waiver from specific requirements in this chapter if a person submits a completed departmental waiver application and required fee to the department, including justification showing the requested waiver is consistent with the LOSS standards in this chapter, and is consistent with the purpose and objectives of this chapter to assure public health protection.

(2) If an applicant desires to modify and resubmit a previously denied waiver request, the process described above in subsection (1) of this section shall be followed again.

[]

NEW SECTION
WAC 246-272B-26001 Enforcement. (1) The department:

(a) Shall enforce the rules of chapter 246-272B WAC; or

(b) May refer cases within their jurisdiction to the local prosecutor's office or office of the attorney general, as appropriate.

(2) When a person violates the provisions under this chapter, the department, local health officer, local prosecutor's office, or office of the attorney general may initiate enforcement or disciplinary actions, or any other legal proceeding authorized by law, including, but not limited to, any one or a combination of the following:

(a) Informal administrative conferences, convened at the request of the department or owner, to explore facts and resolve problems;

(b) Orders directed to the owner and/or operator of the LOSS and/or person causing or responsible for the violation of the rules of chapter 246-272B WAC;

(c) Denial, suspension, modification, or revocation of permits, approvals, or certification; and

(d) Civil or criminal action.

(3) Orders authorized under this section include the following:

(a) Orders requiring corrective measures necessary to effect compliance with chapter 246-272B WAC which may include a compliance schedule; and

(b) Orders to stop work and/or refrain from using any LOSS or portion of the LOSS or improvements to the LOSS until all permits, certifications, and approvals required by rule or statute are obtained.

(4) Enforcement orders issued under this section shall:

(a) Be in writing;

(b) Name the person or persons to whom the order is directed;

(c) Briefly describe each action or inaction constituting a violation of the rules of chapter 246-272B WAC, or applicable local code;

(d) Specify any required corrective action, if applicable;

(e) Specify the effective date of the order, with time or times of compliance;

(f) Provide notice of the consequences of failure to comply or repeated violation, as appropriate. Such notices may include a statement that continued or repeated violation may subject the violator to:

(i) Denial, suspension, or revocation of a permit approval, or certification; and/or

(ii) Referral to the office of the county prosecutor or attorney general;

(iii) Other appropriate remedies;

(g) Provide the name, business address, and phone number of an appropriate staff person who may be contacted regarding an order;

(h) Comply with chapters 43.70 and 34.05 RCW if issued by the department.

(5) Enforcement orders shall be personally served in the manner of service of a summons in a civil action or in a manner showing proof of receipt.

(6) The department shall have cause to deny the application or reapplication for an operational permit or to revoke, suspend, or modify a required operational permit of any person who has:

(a) Failed or refused to comply with the provisions of chapter 246-272B WAC, or any other statutory provision or rule regulating the operation of a LOSS; or

(b) Obtained or attempted to obtain a permit or any other required certificate or approval by misrepresentation.

(7) For the purposes of subsection (6) of this section and WAC 246-272B-27001, a person is defined to include:

(a) Applicant;

(b) Reapplicant;

(c) Permit holder; or

(d) Any individual associated with (a), (b) or (c) of this subsection including, but not limited to:

(i) Board members;

(ii) Officers;

(iii) Managers;

(iv) Partners;

(v) Association members;

(vi) Agents; and in addition

(vii) Third persons acting with the knowledge of such persons.

[]

NEW SECTION

WAC 246-272B-27001 Notice of decision -- Adjudicative proceeding. (1) The department shall provide notice of a denial, suspension, modification or revocation of a permit, certification, or approval consistent with RCW 43.70.115, chapter 34.05 RCW, and chapter 246-10 WAC.

(2) A person contesting a departmental decision regarding a permit, certificate, approval, or fine may file a written request for an adjudicative proceeding consistent with chapter 246-10 WAC.

(3) Department actions are governed under the Administrative Procedure Act, chapter 34.05 RCW, chapter 43.70.115 RCW, this chapter, and chapter 246-10 WAC.

(4) All LOSS contract jurisdictions shall establish rules for conducting hearings requested to contest a local health officer's actions.

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NEW SECTION
WAC 246-272B-28001 Severability. If any provision of this chapter or its application to any person or circumstances is held invalid, the remainder of this chapter, or the application of the provision to other persons or circumstances, shall not be affected.

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NEW SECTION
WAC 246-272B-0990 Fees. The minimum fee for required review of larger on-site system's engineering reports and plans and specifications shall be four hundred dollars. If review time exceeds eight hours, fifty dollars for each additional hour or part of an hour shall be added to the minimum fee. The fee for presite inspections for larger on-site systems shall be one hundred dollars per visit. The fee for final inspections of larger on-site systems shall be one hundred dollars per site visit.

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